

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application.

1. (Currently Amended) A power converter comprising:
 - a series transformer having a primary winding connected in series with a line and having a secondary winding;
 - a plurality of array transformers having respective primary and secondary windings, the primary windings being connected in series, wherein the primary windings of the multiple array transformers that are connected in series are connected to the secondary winding of the series transformer;
 - a plurality of pairs of normally-on switches, each pair of normally-on switches being connected in series with corresponding ends of the primary ~~windings~~ winding of a respective array transformer;
 - a plurality of normally-off current bypass devices, each normally-off current bypass device being connected in parallel with a respective primary winding of a corresponding one of the array transformers and the switches connected to the ends of the primary winding of the corresponding array transformer;
 - a plurality of AC-DC converter units, each AC-DC converter unit having an AC side connected to the secondary winding of one of the array transformers, and a DC side; and
 - a plurality of mutually independent DC circuits, each DC circuit being connected to the DC side of a corresponding one of the AC-DC converter units, wherein, by turning on the current bypass device of the primary winding of a specific array transformer and turning off the switches at the ends of the primary winding of the specific array transformer, the specific array transformer and the AC-DC converter

unit connected to the specific array transformer are electrically isolated without electrically isolating another array transformer.

2. (Previously Presented) The power converter according to claim 1, including a plurality of the AC-DC converter units connected to each of the secondary windings of each of the array transformers at the AC sides of the AC-DC converter units, wherein the DC sides of the plurality of AC-DC converter units that are connected to the secondary windings of each of the array transformers are connected to a respective common DC circuit, the common DC circuits connected to the DC sides of respective AC-DC converter units being independent of each other.

3. (Previously Presented) The power converter according to claim 1, wherein each of the array transformers includes a plurality of transformers connected in series.

4. (Currently Amended) A power converter comprising:

a plurality of array transformers having respective primary and secondary windings, the primary windings being connected in series, wherein the primary windings of the multiple array transformers that are connected in series are connected to the secondary winding of the series transformer;

a plurality of pairs of normally-on switches, each pair of normally-on switches being connected in series with corresponding ends of the primary ~~windings~~ winding of a respective array transformer;

a plurality of normally-off first current bypass devices, each normally-off first current bypass device being connected in parallel with a primary winding of a corresponding one of the array transformers and the switches connected to the ends of the primary winding of the corresponding array transformer;

a plurality of AC-DC converter units, each AC-DC converter unit having an AC side connected to the secondary winding of one of the array transformers, and a DC side;

a plurality of mutually independent DC circuits respectively connected to the DC side of a corresponding one of the AC-DC converter units; and

a normally-off second current bypass device connected in parallel with all of the series-connected array transformers, wherein, by turning on the first current bypass device of the primary winding of a specific array transformer and turning off the switches at the ends of the primary winding of the specific array transformer, the specific array transformer and the AC-DC converter unit connected to the specific array transformer are electrically isolated without electrically isolating another array transformer.

5. (Previously Presented) The power converter according to claim 4, including a plurality of the AC-DC converter units connected to each of the secondary windings of each of the array transformers at the AC sides of the AC-DC converter units, wherein the DC sides of the plurality of AC-DC converter units that are connected to the secondary windings of each of the array transformers are connected to a respective common DC circuit, the common DC circuits connected to the DC sides of respective AC-DC converter units being independent of each other.

6. (Previously Presented) The power converter according to claim 4, wherein each of the array transformers includes a plurality of transformers connected in series.